APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,202	11/18/1999	GREGORY DAVID DOOLITTLE	EN999058	6901

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EXAMINER
WILLETT, STEPHAN F

ART UNIT	PAPER NUMBER
2141	

/5

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___3___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jun 25, 2003* _____ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1, 3, 4, 9-11, 14-22, 27, 29, 30, 35-37, 40-48, 53-56, 58, 60, 61,* is/are pending in the application.

    4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1, 3, 4, 9-11, 14-22, 27, 29, 30, 35-37, 40-48, 53-56, 58, 60, 61, 66-* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some* c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103©

and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 1, 3-4, 9-11, 14-22, 27, 29-30, 35-37, 40-48, 53-56, 58, 60-61, 66-68 and 70-79

are rejected under 35 U.S.C. 103(a) as being unpatentable over Schoening et al. with Patent

Number 6,202,465 in view of Belkin et al. with Patent Number 6,542,920.

4.   Regarding claim(s) 1, 27, 53, 58, Schoening teaches a manipulation of threads within a

computer network. Schoening teaches receiving a 1st request, col. 35, lines 26-27. Schoening

teaches the 1st request waiting for a response from a 2nd request, col. 35, lines 27-28 and

"declares 'pre-conditions' that represent one or more dependencies of the Service Module

Function on another Service Module Function", col. 22, lines 65-67. Schoening teaches

selecting from a thread pool, col. 41, lines 25-34 and col. 23, lines 22-25 which teaches that the

execution order dictates which threads are necessary. Schoening teaches altering thread pools as

"the timeBase providing the partial order of Service Module Functions needed to effectuate the

needed services is selected", col. 42, lines 22-24 based on the synchronized threads, col. 40, lines

61-62, and col. 41, lines 39-42 and as a partial order, col. 41, lines 3-14. Schoening teaches the

invention in the above claim(s) except for explicitly teaching dynamically altering existing

eligible thread pools to serve a request and setting a mask with the response. In that Schoening

operates to generate multiple threads the artisan would have looked to the networking arts for

details of implementing thread allocation. In that art, Belkin, a related network thread adapter,

teaches "the server implements multiple thread pools", col. 4, lines 38-39 in order to process a

request or a response. Belkin specifically teaches "this evaluation function ... may be user

invoked to evaluate a request when one or more condition are satisfied", col. 15, lines 33-35.

Dynamically determining different eligible thread groups or process configurations to complete a

request is taught by the evaluation of a function to determine which thread pools are appropriate

to service the request. Belkin specifically teaches "each row of table specifies one association

between a particular thread pool and a particular type of service", col. 7, lines 41-42. The request

or response is associated or masked to a particular thread pool. Further, Belkin suggests that "it

is the request processing mechanism that is primarily responsible for invoking the evaluation

function associated with a thread pool", col. 16, lines 44-46 which results from implementing his

thread groupings functions to create new eligible pools. The motivation to incorporate dynamic

thread groupings with masking insures that deadlocks, efficient processing, among other delays are overcome with related request types. Thus, it would have been obvious to one of ordinary skill in the art to incorporate the dynamic grouping of threads and masking as taught in Belkin into the network described in the Schoening patent because Schoening operates with threads and Belkin suggests that optimization can be obtained by manipulating thread pools and request types. Therefore, by the above rational, the above claim(s) are rejected.

5.   Regarding claims 29, 60, 70, Belkin teaches masking thread pools as "each row of table specifies one association between a particular thread pool and a particular type of service", col. 7, lines 41-42. Thus, the above claim limitations are obvious in view of the combination.

6.   Regarding claims 4, 61, Schoening teaches alter processing when a wait state is recognized, col. 39, lines 65-67. Thus, the above claim limitations are obvious in view of the combination.

7.   Regarding claims 9, 35, 66, Schoening teaches altering thread groups for other parallel processes, col. 40, lines 36-38. Thus, the above claim limitations are obvious in view of the combination.

8.   Regarding claims 10-11, 36-37, 67-68, Schoening teaches thread pools based on call backs, col. 15, lines 46-48 and col. 16, lines 7-8. Thus, the above claim limitations are obvious in view of the combination.

9.   Regarding claims 14-15, 18, 40-41, 44, 54, 71-72, 75, Schoening teaches requests at servers, col. 7, lines 748-50. Thus, the above claim limitations are obvious in view of the combination.

10.   Regarding claims 16-17, 42-43, 73-74, Schoening teaches client on the same or different computer, col. 39, lines 251-60. Thus, the above claim limitations are obvious in view of the combination.

11.   Regarding claims 19, 45, 76, Schoening teaches avoiding deadlocks, col. 3, lines 24-30, col. 54, lines 1, 12-13 and in Belkin at col. 16, lines 4-8 as "no free threads available", etc.. Thus, the above claim limitations are obvious in view of the combination.

12.   Regarding claims 20, 46, 77, Schoening teaches ignoring input from a 2nd requester, col. 40, lines 65-67. Thus, the above claim limitations are obvious in view of the combination.

13.   Regarding claims 21-22, 47-48, 55-56, 78-79, Schoening teaches the same or different requesters, col. 18, lines 6-14. Thus, the above claim limitations are obvious in view of the combination.

Response to Amendment

14.   The broad claim language used is interpreted on its face and based on this interpretation the claims have been rejected.

15.   The limited structure claimed, without more functional language, reads on the references provided. Thus, Applicant's arguments can not be held as persuasive regarding patentability.

16.   Applicant suggests "this dynamically altering provides, for example, an increase in the number of thread pools in a set from one pool to two pools", Paper No. 14, Page 13, lines 26-27. However, the applicant's own background art teaches "another approach is the dual pool approach", pg. 4, line 3. Thus, Applicant's arguments can not be held as persuasive regarding

patentability.

17.   Applicant suggests "Schoening applies preconditions to assemble threads from execution components", Paper No. 14, Page 14, lines 7-8. Correct, and based on what threads meet those preconditions creates a defacto thread pool, and as conditions dynamically change, as admitted by "there is a dynamically quality to Schoening's determination", Paper No. 14, Page 16, lines 4-5, then the threads create new pools or sets that can meet the changed conditions, thus there is a new eligible pool of threads that can satisfy the new conditions. However, Belkin was introduced to further exemplify the pools and masks, as discussed above. Thus, Applicant's arguments can not be held as persuasive regarding patentability.

18.   Applicant suggests "altering occurs upon receipt of the request waiting on the response", Paper No. 14, Page 14, lines 14-15 is not taught. However, the definition of thread is "a process that is part of a larger process", thus the larger process many times will wait on the process or subprocess by definition unless the processes happen to terminate at the same time. The fact the determination of thread pools is performed during startup does not obfuscate Schoening's teachings. Thus, Applicant's arguments can not be held as persuasive regarding patentability.

19.   Applicant suggests "a careful reading of Schoening reveals no express teaching of parallel execution determination that is done", Paper No. 14, Page 15, lines 15-16, but admits "where some [assembling of threads] are run in parallel", Paper No. 14, Page 14, line 9. However, the definition of parallel processing is "two or more processors running simultaneously", and the references teach conditions such a processes being dependent on one another process, thus as discussed above the larger process many times will wait on the process or subprocess by

definition unless the processes happen to terminate at the same time. The references should not

be read in a vacuum, the teachings are not mutually exclusive, and must be taken in context of

what was reasonable based on the subject matter as a whole as would have been understood at

the time the invention was made to a person having ordinary skill in the art to which the subject

matter pertains. The significance of the breadth of the claims' language needs to be appreciated.

The clear description in the reference is not obfuscated by the numerous other suggested usages

of said description in the reference. Thus, Applicant's arguments can not be held as persuasive

regarding patentability.

Conclusion

20.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure is disclosed in the Notice of References Cited. A close review of the references is

suggested. The other references cited teach numerous other ways to perform thread pooling, thus

a close review of them is suggested.

21.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Stephan Willett whose telephone number is (703) 308-5230. The examiner

can normally be reached Monday through Friday from 8:00 AM to 6:00 PM.

22.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Rupal Dharia, can be reached on (703) 305-4003. The fax phone number for the

organization where this application or proceeding is assigned is (703) 746-7239.

23.   Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-9605.

sfw

November 13, 2003

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER